

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Prevalence and Socio-economic impact of Depressive Disorders in India- multisite population based cross sectional study
AUTHORS	Banavaram, Arvind; Gururaj, Gopalkrishna; Loganathan, Santosh; Amudhan, Senthil; Varghese, Mathew; Benegal, Vivek; Rao, Girish; Kokane, Arun; BS, Chavan; PK, Dalal; Ram, Daya; Pathak, Kangkan; RK, Lenin Singh; Singh, Lokesh; Sharma, Pradeep; Saha, Pradeep; C, Ramasubramanian; Mehta, Ritambhara; TM, Shibukumar

VERSION 1 - REVIEW

REVIEWER	Diane de Camps Meschino MD FRCPC Department of Psychiatry University of Toronto Canada
REVIEW RETURNED	14-Jan-2019

GENERAL COMMENTS	<p>This study is an important publication supporting the scale, treatment needs, unmet treatment needs, and individual to global benefits of treatment of Depression. It supports epidemiological factors associated with increased odds that require further study. One small detail requires editorial checking.</p> <p>Page13 Table 2. It appears that "million plus cities" and "cities with population of <1 million" are reversed (copied below). The numbers are opposite from your text: "Residents of million plus cities had three times higher odds of having current DD in comparison with rural residents. "</p> <p>Rural (ref) 1.0 Million plus cities (> 1 million) 0.99 (0.80-1.25) 0.995 Cities with population of < 1 million 3.06 (2.63-3.55) <0.001</p>
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REVIEWER	Sujit Rathod London School of Hygiene and Tropical Medicine, United Kingdom
REVIEW RETURNED	18-Jan-2019

GENERAL COMMENTS	<p>The manuscript concerns the prevalence and distribution of depressive disorder among adults, using data from India's National Mental Health Survey.</p> <p>This is a very well-written paper which generates important evidence to inform policy making. I have a few minor comments for the authors' consideration:</p>
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	<p>1) Page 7 Lines 25-29: Specify where these studies took place</p> <p>2) Page 8 Line 45: How were adults selected from the households? What were inclusion and exclusion criteria?</p> <p>3) Methods: How was lifetime depression diagnosed?</p> <p>4) Page 10 Line 19-22: What were the main reasons for non-response of households and of adults?</p> <p>5) Table 1: Include state-level prevalence figures here and just summarize the range.</p> <p>6) Page 14 Line 3-4: This is first mention of co-morbid mental disorders. Need to explain that these were diagnostic sections of the interview in the Methods section.</p> <p>7) Page 14 Line 7-14 (and table 3): Why not include people without current depression as a comparison group?</p> <p>8) Page 15 Line 7 (in table 3): Convert INR figures to USD, which will be more useful for international readers. You have done this in the Discussion section.</p> <p>9) Page 15 Line 12: Need to explain how 'treatment gap' is defined in the Methods section.</p> <p>10) Page 15 Line 15: Do you mean "However, individuals aged 60+ years had..."</p> <p>11) Page 16 (Discussion): I don't see text about Limitations. For example, that the 12 states were purposely (not randomly) selected, and mega-cities were excluded, and so it's not necessarily the case that these data can be interpreted as nationally representative.</p> <p>12) Page 16 Line 13: You write "reliable" but perhaps you mean "accurate" ? Unless you did reliability testing.</p> <p>13) Page 17 Line 9: Perhaps you mean "prevalence" rather than "burden", as the latter is associated with DALYs.</p> <p>14) Page 17 Line 27-50: The authors should discuss why they feel urban residence is associated with depression. What 'urban-specific strategies' do they recommend?</p> <p>15) Discussion. I don't see any discussion of the treatment gap/duration/delay findings.</p>
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VERSION 1 – AUTHOR RESPONSE

Reviewer: 1 (Diane de Camps Meschino, MD FRCPSC from Department of Psychiatry, University of Toronto, Canada)

Sl no	Reviewer comment	Authors response
1	This study is an important publication supporting the scale, treatment needs, unmet treatment needs, and individual to global benefits of treatment of Depression. It supports epidemiological factors associated with increased odds that require further study.	We thank the reviewer for supporting and highlighting the importance of manuscript
2	<p>Page13 Table 2. It appears that "million plus cities" and "cities with population of <1 million" are reversed (copied below). The numbers are opposite from your text: "Residents of million plus cities had three times higher odds of having current DD in comparison with rural residents. "</p> <p>Rural (ref) 1.0</p> <p>Million plus cities (> 1 million) 0.99 (0.80-1.25) 0.995</p>	Sincere regrets for the mistake. The interchange of description in Table 2 (Page no-12) has been corrected,

	Cities with population of < 1 million 3.06 (2.63-3.55) <0.001	
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Reviewer: 2 (Sujit Rathod from London School of Hygiene and Tropical Medicine, United Kingdom)

Sl no	Reviewer comment	Author response
1	This is a very well-written paper which generates important evidence to inform policy making	We thank the reviewer for placing on record their appreciation for the manuscript.
2	<p>Page 7 Lines 25-29: Specify where these studies took place</p> <p>Reviewer's reference is to this particular sentence in the manuscript. "Previous epidemiological studies on depression in India have been conducted using differing methodologies, sample sizes, sampling techniques, study instruments, case definitions and on different study populations at different time periods".</p>	<p>Several psychiatric epidemiological studies have been conducted in India over the past 3-4 decades at different time periods on diverse population.</p> <p>These studies have been undertaken in different parts of India (including urban, rural and transitional communities) and total number studies are more than 40. As it will be difficult to mention the name and location of all these study sites due to word restriction in the manuscript, it has not been mentioned.</p> <p>However, reviews of psychiatric epidemiological studies conducted in India were undertaken in the past and has been published. [which includes 3 reviews (Ref 13,14,16) and 1 metanalysis (Ref 15)]. One of these reviews (i.e. ref 13) was authored by the corresponding author of the present manuscript. All these reviews had summarized their observations by highlighting that -studies used different methodologies, sample size, sampling techniques, study instruments, case definitions, etc. These variations across the studies hindered the possibility of deriving national level estimates for mental disorders.</p> <p>In view of this, the sentence has been retained as such and information provided.</p>
3	Page 8 Line 45: How were adults selected from the households? What were inclusion and exclusion criteria?	<p>Method of selecting adults from the households was:</p> <p>Step1: Listing of all the members in the household</p> <p>Step 2: All the eligible members (individuals aged > 18 years) who were ordinarily residing for a minimum period of 6 months in the</p>

		<p>selected households were included for the survey.</p> <p>Step 3: Among the included participants, those available and consenting for the study were interviewed.</p> <p>Step 4: Individuals not available even after 3 planned visits (visits were planned according to the convenience of the participants) by field data collector were considered as non responders.</p> <p>The above information is available in methods section, Paragraph -3, page -7</p> <p>Exclusion criteria: Temporary visitors / visiting relatives who are not members of the household.</p> <p>Exclusion criteria have been inserted in the manuscript, under methods section, page-7, paragraph-3.</p>
4	Methods: How was lifetime depression diagnosed?	<p>The Diagnosis of Depressive Disorder in National Mental Health Survey was arrived at using MINI International Neuropsychiatric Interview Schedule version 6. The depression module in MINI has two screener questions.</p> <p>Screening question 1: did you feel sad or depressed? Felt down or empty? Felt grouchy or annoyed?</p> <p>Screener question 2: were you bored a lot or much less interested in things (like playing your favorite games)? Have you felt that you couldn't enjoy things?</p> <p>Study participants were enquired about presence of the screener symptoms , a) At any time in their life and b) In the previous 2 weeks time.</p> <p>Participants reporting presence of these symptoms at any time in their life, AND not in the previous 2 weeks time, were further probed with other questions in depression module of MINI to elicit detailed symptoms of depression pertaining to that past episode. Based on the reply to all questions of depression module, participants were diagnosed as having past episode of Depressive Disorder.</p>

		<p>If Participants reported presence of the screener symptoms in the previous 2 weeks time, then following the pattern described above they were diagnosed as having Current episode of Depressive Disorder.</p> <p>Finally, participant positive for PAST EPISODE of depression with or without CURRENT EPISODE of depression were diagnosed as having LIFETIME Depressive Disorder.</p>
5	Page 10 Line 19-22: What were the main reasons for non-response of households and of adults?	<p>Head of the household not consenting to participate in the study was the main reason for non-response at household level.</p> <p>The main reason for non-response of adults was their non-availability for interview even after 3 planned household visits (planned according to the convenience of participants) by the field data collector.</p>
6	Table 1: Include state-level prevalence figures here and just summarize the range.	<p>Table-1 only summarizes the distribution of Depressive Disorders across different socio-demographic characteristics.</p> <p>The summary of prevalence of depressive disorders among the different NMHS states has already been provided in the manuscript in results section page 9, paragraph 4.</p> <p>Detailed analysis of distribution of mental disorders including Depressive Disorders across 12 states has just been completed and is planned for publication elsewhere.</p>
7	Page 14 Line 3-4: This is first mention of co-morbid mental disorders. Need to explain that these were diagnostic sections of the interview in the Methods section.	Suggestion has been inserted in methods section, Paragraph-8, page-8&9
8	Page 14 Line 7-14 (and table 3): Why not include people without current depression as a comparison group?	The manuscript provides details for individuals with current DD with regard to disability and socioeconomic impact. As a comparison with individuals without mental disorder, with past Depressive Disorders and those with other mental involves different type of analysis. Hence, the same has not been included in the manuscript. However, such analysis is being undertaken and is planned for publication elsewhere.

9	Page 15 Line 7 (in table 3): Convert INR figures to USD, which will be more useful for international readers. You have done this in the Discussion section.	Suggestion has been incorporated in table 3, page -14.
10	Page 15 Line 12: Need to explain how 'treatment gap' is defined in the Methods section.	Definition of treatment gap has been incorporated in results section, Paragraph-8, page-14
11	Page 15 Line 15: Do you mean "However, individuals aged 60+ years had..."	<p>Sentence has been rephrased as follows: "Though there was not much difference in the treatment gap across different age groups, treatment gap was slightly high among 60+ individuals (81.0%)."</p> <p>The above sentence is included in results section, Paragraph -8, Page-14&15.</p>
12	Page 16 (Discussion): I don't see text about Limitations. For example, that the 12 states were purposely (not randomly) selected, and mega-cities were excluded, and so it's not necessarily the case that these data can be interpreted as nationally representative.	Text on limitations has been incorporated in the manuscript under discussion section, Paragraph- 8, page -19
13	Page 16 Line 13: You write "reliable" but perhaps you mean "accurate" ? Unless you did reliability testing	<p>The word "reliable" has been replaced with "accurate".</p> <p>Discussion section, Paragraph-1, Page-16</p>
14	Page 17 Line 9: Perhaps you mean "prevalence" rather than "burden", as the latter is associated with DALYs.	<p>The word "burden" has been replaced with "prevalence"</p> <p>Discussion section, Paragraph-4, Page -17</p>
15	Page 17 Line 27-50: The authors should discuss why they feel urban residence is associated with depression. What 'urban-specific strategies' do they recommend?	Suggestion has been incorporated in discussion section, paragraph-5, Page -17 &18
16	Discussion. I don't see any discussion of the treatment gap/duration/delay findings	Suggestion has been incorporated in discussion section, Paragraph-6 , Page -18,

VERSION 2 – REVIEW

REVIEWER	Sujit Rathod London School of Hygiene and Tropical Medicine, United Kingdom
REVIEW RETURNED	04-Mar-2019

GENERAL COMMENTS	I am satisfied with the authors' responses and revisions.
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